APRIL/MAY 2023

CEEL63A/BEEL63A/UEEL63A — MICROCONTROLLER 8051 AND ITS APPLICATIONS

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is microcontroller?
2. List the features of 8051.
3. What is meant by counter?
4. Define interrupt priority.
5. Give the example of register addressing mode.
6. What do you mean by bit level logic operation?
7. Write the opcode for push instructions.
8. What is called loop?
9. Compare D/A and A/D conversion.
10. What is stepper motor?

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Give a brief account on 8051 oscillator and clock.

Or

(b) Explain the flag bits and PSW register.

12. (a) Enumerate the serial data transmission modes.

Or

(b) Explain in detail serial data interrupt.

13. (a) Explain the addressing modes of 8051.

Or

(b) Write a program to add two 16-bit numbers using 8051 instructions.

14. (a) What is called data exchange? Explain.

Or

(b) Elucidate PUSH and POP instructions in 8051.

15. (a) Write a short note on display interfacing.

Or

(b) Give a note on analog to digital converter.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Describe the architecture of 8051 microcontroller.

17. Explain in detail the counter and timer modes of 8051.

18. Enumerate the byte level and, bit level logic operations.

19. Explain the following (a) External data move (b) Code memory read only data move.

20. Discuss in detail the stepper motor interfacing.

———————